

REMARKS

In response to the Office Action mailed March 3, 2010, Applicants respectfully request reconsideration. Claims 1-14 were previously pending in this application, with claims 1, 8, 10 and 14 being independent claims. By this amendment, claims 1, 8, 10, and 14 have been amended and claim 12 has been canceled. The application as presented is believed to be in condition for allowance.

I. Rejections under 35 U.S.C. §103

The Office Action rejects claims 1-4 (including independent claim 1) under U.S.C. §102(b) as allegedly being obvious over Japanese Patent Publication No. 2000-306605 ("Yonehara") in view of U.S. Patent No. 3,751,375 ("Bender"). The Office Action rejects claims 8-14 (including independent claims 8, 10 and 14) under 35 U.S.C. §103(a) as purportedly being obvious over U.S. Patent No. 6,291,763 ("Nakamura") in view of U.S. Patent No. 4,902,440 ("Takeyama") in further view of Bender. In view of the amendments herein, Applicants respectfully request reconsideration.

A. Independent Claim 1

Claim 1 as amended recites, "A method of forming an electrolyte comprising an electrolyte composition and a matrix polymer, the method comprising: forming the matrix polymer by polymerization of a first compound having at least three isocyanate groups and a second compound having at least two nucleophilic groups containing active hydrogen, **wherein said polymerization is performed in accordance with a Michael addition reaction** and wherein said polymerization is performed after a precursor for the matrix polymer is brought into contact with a surface on which the electrolyte is to be formed; (emphasis added)." Support for this amendment is found at least at paragraph [0131] of the specification as originally filed.

The Office Action asserts that paragraphs [0058] and [0070] of Yonehara disclose polymerizing a first compound having at least two isocyanate groups and a second compound having at least two nucleophilic groups containing active hydrogen (Office Action, page 3). However, the polymerization described in Yonehara is promoted by a photopolymerization initiator and is not performed in accordance with a Michael addition reaction (Yonehara, [0025]). Bender

fails to cure this deficiency of Yonehara because Bender fails to disclose how the polymerization described therein is performed.

For at least this reason, claim 1 patentably distinguishes over Yonehara and Bender, and it is respectfully requested that the rejection under 35 U.S.C. §103 be withdrawn. Claims 2-7 depend from claim 1 and each of these dependent claims patentably distinguishes over Yonehara and Bender for at least the same reasons.

B. Independent Claim 8

Amended claim 8 is directed to a photocell and recites, *inter alia*, “wherein the matrix polymer is a polymer formed by polymerization of a first compound having at least three isocyanate groups and a second compound having at least two nucleophilic groups containing active hydrogen, **wherein said polymerization is performed in accordance with a Michael addition reaction** (emphasis added).” Neither Nakamura nor Takeyama nor Bender discloses or suggests the above-highlighted limitation of claim 8.

In the rejection of previously presented claim 12, the Office Action asserts that “Nakamura as modified by Takeyama teaches a polymer is formed by polymerization of a first compound having at least two isocyanate group, in the form of tolylene diisocyanate, and a second compound having at least two nucleophilic groups containing active hydrogen atoms, in the form of polytetramethylene glycol” and that “[t]hese compounds would *inherently* result in a Michael addition reaction upon polymerization (emphasis added).”

However, based on MPEP §2112(IV), a rejection based on inherency may only be established if the allegedly polymerization is necessarily performed in accordance with a Michael addition reaction.¹ No where does Nakamura or Takeyama teach that polymerization must be performed in accordance with a Michael addition reaction. Without an explicit teaching that the

¹ MPEP §2112(IV) states: “The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic...To establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.’...In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.”

polymerization described in Nakamura or Takeyama must necessarily be performed in accordance with a Michael addition reaction, one of skill could expect the polymerization to be performed in any of multiple ways. Indeed, Nakamura describes using radical polymerization using a polymerization initiator such as heat, light, electron beams, or an electrochemical agent (Nakamura, col. 26, lines 33-40; col. 27, lines 6-14) and Takeyama describes using a UV-curable polymerization process (Takeyama, abstract). Accordingly, polymerization performed in accordance with a Michael addition reaction **is not inherent** in any combined system of Nakamura and Takeyama. Furthermore, as described above, Bender does not cure this deficiency of Nakamura and Takeyama because the Bender is silent regarding how the polymerization described therein is performed.

For at least this reason, claim 8 patentably distinguishes over the combination of Nakamura, Takeyama, and Bender and it is respectfully requested that the rejection under 35 U.S.C. §103 be withdrawn. Claim 9 depends from claim 8 and patentably distinguishes over Nakamura, Takeyama, and Bender for at least the same reasons.

C. Independent Claim 10

Amended claim 10 is directed to a method for manufacturing a photocell. The method comprises, *inter alia*, **“polymerizing, in accordance with a Michael addition reaction, the first compound and the second compound after the mixed solution is brought into contact with the electrode formed on the surface of the substrate... (emphasis added).”**

As should be appreciated from the foregoing discussion, claim 10 patentably distinguishes over the Nakamura, Takeyama, and Bender because these references, when considered alone or in combination, fail to disclose the above-highlighted limitation of claim 10. Accordingly, it is respectfully requested that the rejection under 35 U.S.C. §103 be withdrawn. Claims 11-13 depend from claim 10 and each of these dependent claims patentably distinguishes over Nakamura, Takeyama, and Bender for at least the same reasons.

D. Independent Claim 14

Amended claim 14 is directed to a method for manufacturing a photocell. The method comprises, *inter alia*, **“polymerizing, in accordance with a Michael addition reaction, the first**

compound and the second compound ... (emphasis added).”

As should be appreciated from the foregoing discussion, claim 14 patentably distinguishes over Nakamura, Takeyama, and Bender because these references, when considered alone or in combination, fail to disclose the above-highlighted limitation of claim 14. Accordingly, it is respectfully requested that the rejection of claim 14 be withdrawn.

II. General Comments on Dependent Claims

Since each of the dependent claims depends from an independent claim that is believed to be in condition for allowance, Applicants believe that it is unnecessary at this time to argue the allowability of each of the dependent claims individually. However, Applicants do not necessarily concur with the interpretation of the dependent claims as set forth in the Office Action, nor do Applicants concur that the bases for the rejection of any of the dependent claims is proper. Therefore, Applicants reserve the right to specifically address the patentability of the dependent claims in the future if deemed necessary.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Dated: 6-3-10

Respectfully submitted,

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